# 4/02/2014 - RFP No.: HSR13-57

# **California High-Speed Rail Authority**



RFP No.: HSR 13-57

# Request for Proposals for Design-Build Services for Construction Package 2-3

Reference Material, Part A.2 Standard Drawings DRAINAGE

DRAWING TITLE SD-CD-900 TRACK DRAIN/UNDERDRAIN, CLEANOUT AND RISER DETAILS

DRAWING DRAWING NO.

SD-CD-901 DITCH DETAILS

SD-CD-902 STORM DRAIN HOLES

SD-CD-903 RETAINING WALL DRAINAGE DETAILS

SD

SD SD

PARSONS BRINCKERHOFF



# **CALIFORNIA HIGH-SPEED TRAIN PROJECT** SIERRA SUBDIVISION

STANDARD DRAWINGS CONTRACT PACKAGE 2-3 SHEET INDEX

CONTINA			
DRAWING NO. INDEX-2 CP2-			
SCALE	NO	SC	ALE

SHEET NO.

FINISHED GRADE-COVERAGE

PVC PIPE (TYP)-

**INTERMEDIATE RISER/CLEANOUT** 

SCALE: 1"=1'-0"

DRAINAGE AGGREGATE

PERFORATED PVC

45° WYE-

ONE-SACK CEMENT — SLURRY UNDER AND AROUND FITTINGS

-1/2" GALVANIZED BOLT AND NUT WITH FLAT HEAD AND LOCK WASHERS

-POSITIVE JOINT COUPLER (TYP)

-RISER @ 45° (SEE NOTE 1)

-PERFORATED PVC

PROVIDE 6" SECTION OF SOLID PIPE AT START OF PIPE RUNS

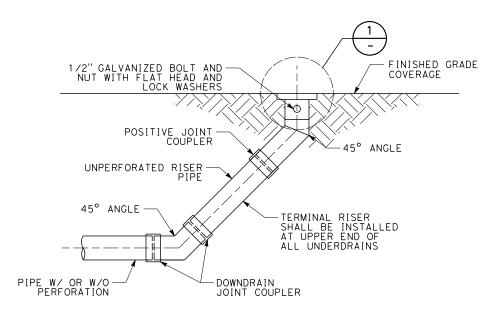
PARSONS BRINCKERHOFF



SCALE: 8"=1'-0"

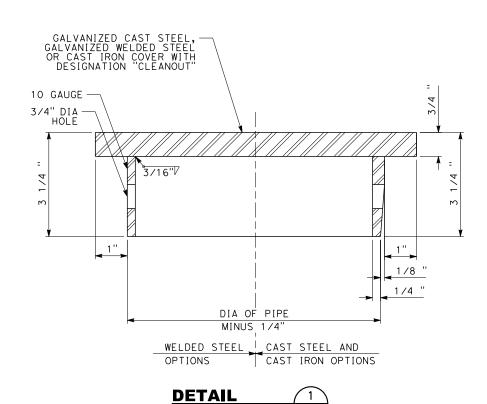
### NOTES:

1. RISER MAY BE ANGLED AT 90 DEGREES DUE TO SPACE CONSIDERATIONS.



# **TERMINAL RISER DETAIL**

SCALE: 1"=1'-0"



# **CALIFORNIA HIGH-SPEED TRAIN PROJECT DRAINAGE STANDARD**

CLEANOUT AND RISER DETAILS

		-
DRAWIN		CD-900
SCALE		
	AS	SHOWN

TRACK DRAIN/UNDERDRAIN SHEET NO.

### **DITCH DETAILS** NO SCALE K. SISTLA DRAWN BY HECKED BY A. ARTAHI CHARGE DATE BY CHK APP DESCRIPTION 01/24/2014

TYPE D ("V") DITCH

-LIP ON UPHILL SIDE

-LIP ON UPHILL SIDE

WELDED WIRE FABRIC W1.4 X W1.4 - 6X6

TYPE A (TRAPEZOID) DITCH

WELDED WIRE FABRIC W1.4 X W1.4 - 6X6

TYPE B ("V") DITCH

TYPE C (TRAPEZOID) DITCH

-CUT-OFF

-CUT-OFF WALL

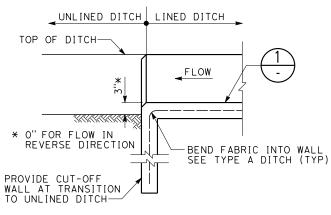
WALL

\* SEE NOTE 2

\* SEE NOTE 2

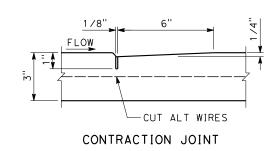
\* SEE NOTE 2

\* SEE NOTE 2



# **SECTION**

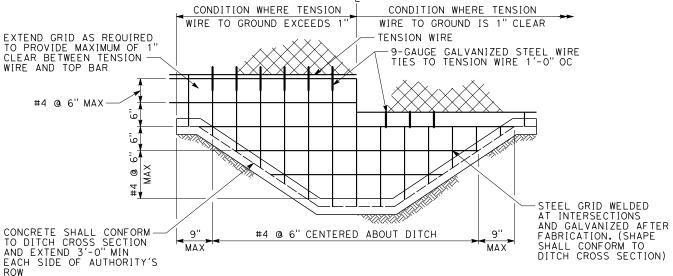
# 1/2" PREFORMED -3/4" JOINT SEALER EXPANSION JOINT -PAINT DOWEL ON THIS SIDE OF JOINT WITH BITUMINOUS PAINT FILLER 3/4" DIA X 1'-4" SMOOTH STEEL DOWELAT 18" MAXIMUM -26 GAGE SHEET METAL EXPANSION CAP SPACING **EXPANSION JOINT**





# NOTES:

- 1. DITCH LINING SHALL BE CONCRETE OR SHOTCRETE.
- 2. DITCH SHALL CONFORM TO THE FOLLOWING MINIMUM DIMENSIONS:
  - D = DEPTH OF DITCH, 1 FOOT MINIMUM S = SLOPE OF DITCH, SIDES, 2:1 MAX FOR CONCRETE LINED CHANNEL, 3:1 MAX FOR GRASS LINED CHANNEL W = WIDTH OF BOTTOM OF DITCH, 4 FEET MINIMUM
- 3. TYPE A AND B DITCHES SHALL HAVE A CONTRACTION JOINT EVERY 10 FEET, AND AN EXPANSION JOINT EVERY
- 4. OPEN CHANNEL CLOSURE SHALL BE REQUIRED AT EACH LOCATION WHERE AN OPEN CHANNEL PASSES UNDER AUTHORITY'S RIGHT-OF-WAY.



### **OPEN CHANNEL CLOSURE DETAIL**

NO SCALE (SEE NOTE 4)

# **CALIFORNIA** HIGH-SPEED RAIL AUTHORITY

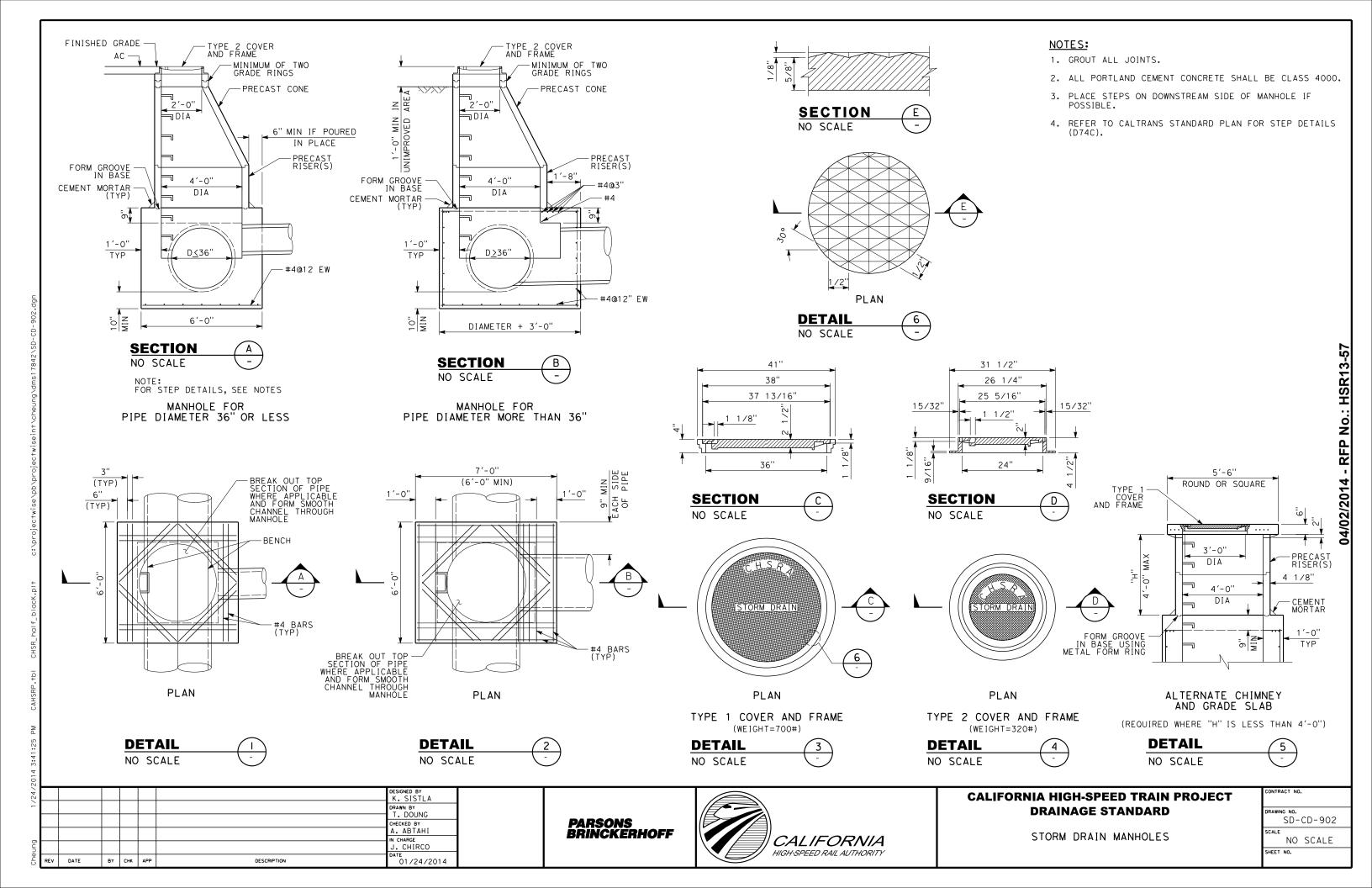
### **CALIFORNIA HIGH-SPEED TRAIN PROJECT DRAINAGE STANDARD**

DITCH DETAILS

Continu	-0	•			
	DRAWING NO. SD-CD-901				
SCALE			Π		
1	NO	SCALE			

SHEET NO.

PARSONS BRINCKERHOFF



NOTES:

BY CHK APP

DESIGNED BY K. SISTLA DRAWN BY CHECKED BY A. ABTAHI N CHARGE J. CHIRCO 01/24/2014

DESCRIPTION

FINISHED GRADE -

BACKFILL TO PREVENT PONDING AFTER REMOVAL OF WALL FORMS AND BEFORE BACKFILLING BEHIND WALLS

PARSONS BRINCKERHOFF

GUTTER INVERT OR TOE OF SLOPE

IMPERVIOUS BACKFILL

1'-0" (MIN)

-PERVIOUS BACKFILL MATERIAL CONTINUOUS BEHIND ALL WALLS

-PERFORATED UNDERDRAIN PIPE TO BE CONNECTED TO DRAINAGE SYSTEM

-1 CUBIC FOOT PERVIOUS BACKFILL MATERIAL WRAPPED IN GEOTEXTILE AND SECURELY TIED AT EACH DRAIN

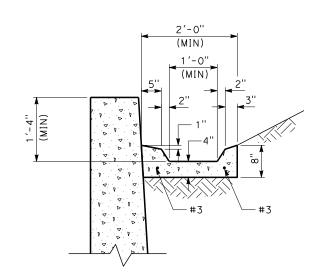
GUTTER -SEE DETAIL ON THIS SHEET

4" Ø DRAIN-

\_\_1'-6" (MIN)

**RETAINING WALL DRAINAGE** 





**TYPICAL GUTTER DETAIL** 

# **CALIFORNIA HIGH-SPEED TRAIN PROJECT DRAINAGE STANDARD**

RETAINING WALL DRAINAGE DETAILS

CONTRA	ACT NO.	•
DRAWIN		CD-903
SCALE	NO	CCALE
	NO	SCALE

SHEET NO.